

## AMENDMENTS TO THE CLAIMS

1-33. (Cancelled)

34. (New) A system for programming a packet-based network having plural nodes for providing services to network subscribers, the system comprising:  
a service creation tool operable to program a service definition package, said service definition package defining a plurality of packet processing behaviors;  
a service control center interfaced with the packet-based network and operable to accept said service definition package for deployment to predetermined network nodes;  
and  
at least one network node interfaced with the network, the node having a network processor, the node operable to perform the one or more packet processing behaviors translated from a network programming language.

35. (New) The system of Claim 34 wherein said packet processing behaviors comprise system parameters.

36. (New) The system of Claim 35 wherein said system parameters comprise global variables.

37. (New) The system of Claim 35 wherein said system parameters comprise node-specific variables.

38. (New) The system of Claim 34 wherein said packet processing behaviors comprise service parameters.

39. (New) The system of Claim 38 wherein said service parameters comprise a plurality of instance variables corresponding to service instances.

40. (New) The system of Claim 34 wherein said packet processing variables comprise customer instances of management variables.

41. (New) The system of Claim 34 wherein said service control center comprises an infrastructure layer operable to perform element management.

42. (New) The system of Claim 41 wherein said service control center further comprises:

- a communication services control module;
- a configuration module;
- an event manager module;
- a performance module; and
- an event bus operably coupled to said communication services control module, said configuration module, said event manager module and said performance module, and operable to communicate event information to said modules.

43. (New) The system of Claim 34 wherein said service control center comprises an execution layer operable to provision a service and execute service rules.

44. (New) The system of Claim 43 wherein said service control center further comprises an imperative scripting engine.

45. (New) The system of Claim 44 further comprising:

- a desktop manager module comprising a proxy application; and
- a service installation module;

wherein said imperative scripting engine is operable to install a service using said proxy application in cooperation with said service installation module.

46. (New) The system of Claim 45 further comprising a services object manager operable to manage software objects corresponding to services implemented on said network, said imperative scripting engine being operable to receive objects from said services object manager and to pass software code corresponding to said objects to a network abstraction layer.

47. (New) A method for providing network services to subscribers using a programmable packet-based network having plural nodes, at least one of said plural nodes having a network processor, said node operable to perform one or more packet processing behaviors translated from a network programming language, the method comprising:
- using a service creation tool to program a service definition package, said service definition package defining a plurality of packet processing behaviors; and
  - using a service control center to accept said service definition package for deployment to predetermined network nodes on said packet-based network.
48. (New) The method of Claim 47 wherein said packet processing behaviors comprise system parameters.
49. (New) The method of Claim 48 wherein said system parameters comprise global variables.
50. (New) The method of Claim 48 wherein said system parameters comprise node-specific variables.
51. (New) The method of Claim 47 wherein said packet processing behaviors comprise service parameters.
52. (New) The method of Claim 51 wherein said service parameters comprise a plurality of instance variables corresponding to service instances.
53. (New) The method of Claim 47 wherein said packet processing variables comprise customer instances of management variables.
54. (New) The method of Claim 47 wherein said service control center comprises an infrastructure layer operable to perform element management.

55. (New) The method of Claim 54 wherein said service control center further comprises:

- a communication-services control module;
- a configuration module;
- an event manager module;
- a performance module; and
- an event bus operably coupled to said communication services control module, said configuration module, said event manager module and said performance module, and operable to communicate event information to said modules.

56. (New) The method of Claim 47 wherein said service control center comprises an execution layer operable to provision a service and execute service rules.

57. (New) The method of Claim 56 wherein said service control center further comprises an imperative scripting engine.

58. (New) The method of Claim 57 further comprising:

- a desktop manager module comprising a proxy application; and
- a service installation module;

wherein said imperative scripting engine is operable to install a service using said proxy application in cooperation with said service installation module.

59. (New) The method of Claim 58 further comprising a services object manager operable to manage software objects corresponding to services implemented on said network, said imperative scripting engine being operable to receive objects from said services object manager and to pass software code corresponding to said objects to a network abstraction layer.